

WE CLAIM:

1. A liquid detector for determining presence of a liquid in a solid, which comprises

- at least one probe adapted for intimate contact with said solid, said probe comprising a light impervious material capable of absorbing said liquid and gradually becoming translucent as said liquid is being absorbed therein;
- means associated with said probe for detecting light translucency in said light impervious material after said light impervious material has absorbed said liquid therein; and
- signal means operating in response to said light translucency detecting means to indicate the presence of said liquid in said light impervious material,

wherein said light impervious material comprises a porous fritted material capable of absorbing said liquid.

2. The liquid detector according to claim 1, wherein said signal means is operative to additionally determine the quantity of said liquid in said solid.

3. The liquid detector according to claim 1, wherein said probe is an aqueous liquid probe.

4. The liquid detector according to claim 1, wherein said probe is cylindrical and is mounted on a probe support.

5. The liquid detector according to claim 1, wherein said light translucency detecting means is disposed in said probe support, said probe has an

upper portion thereof extending in said probe support in a position to allow operation of said light translucency detecting means.

6. The liquid detector according to claim 1, wherein said translucency detecting means comprises a LED diode-photodiode capable of activating a light signal.

7. The liquid detector according to claim 6, wherein said LED diode and said photodiode respectively emits and receives light by means of optic fiber means.

8. The liquid detector according to claim 1, wherein said signal means comprises a buzzer.

9. The liquid detector according to claim 1, wherein said porous fritted material is selected from the group consisting of quartz, silica, sapphire, aluminosodic borosilicate glass, and stone dust.

10. The liquid detector according to claim 6, wherein said LED diode-photodiode generates visible light, infrared and ultra violet radiations.

11. The liquid detector according to claim 10, wherein said visible light, infrared and ultra violet radiations are calibrated to determine light translucency degrees corresponding to predetermined quantities of said liquid in said solid

12. The liquid detector according to claim 1, comprising control means to activate operation of said light translucency detecting means and said signal means.

13. The liquid detector according to claim 12, wherein said control means comprise an electronic chip.

14. The liquid detector according to claim 1, wherein said detecting means and said signal means rare adjusted to indicate liquid saturation level of said impervious material.

15. A water detector for determining water availability in a soil for use in plant cultivation, which comprises:

- at least one water probe adapted to be introduced a predetermined depth into said soil;

- said water probe comprising a light impervious material capable of absorbing water and gradually becoming more translucent as water is being absorbed therein;

- means associated with said water probe for detecting light translucency in said light impervious material following water absorption therein; and

- signal means operating in response to said light translucence detecting means to determine degrees of said light translucency corresponding to quantities of water in said soil and indicate whether or not said soil is in need of additional water.

16. A method for determining presence of a liquid in a solid, which comprises,

providing at least one probe adapted for intimate contact with said solid, said probe comprising a light impervious material gradually becoming translucent as said liquid is being absorbed therein and comprising a porous fritted material capable of absorbing said liquid;

inserting said probe into said soil and absorbing said liquid in said light impervious material;

detecting light translucency in said light impervious material after said light impervious material has absorbed said liquid therein; and

converting results obtained when detecting said light translucency into an indication of the presence of said liquid in said light impervious material.

17. The method according to claim 16, which comprises converting said results to additionally determine the quantity of said liquid in said solid.